

MONTHLY WEATHER REVIEW.

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INTRODUCTION.

This REVIEW contains a general summary of the meteorological conditions which prevailed over the United States and Canada during February, 1886, based upon the reports from the regular and voluntary observers of the Signal Service and from co-operating state weather services.

Descriptions of the storms which occurred over the north Atlantic Ocean during the month are also given, and their approximate paths shown on chart i.

A series of remarkably low barometric readings were reported over the ocean west of the fortieth meridian from the 24th to the 28th, inclusive; pressures below 29.0 continued throughout this period.

The average number of areas of low pressure during February in the last twelve years is 11.8, or 2.8 greater than the number traced on chart i for February, 1886.

The temperature has been below the normal by from 1° to 7° in the districts east of the one-hundredth meridian, except in the Canadian Maritime Provinces, where it was slightly above the normal; to the westward of the meridian mentioned the month has been warmer than the average, the departures above the normal temperature being most marked in the northern slope, where they ranged from 10° to 16°.

The minimum temperatures recorded from the 3d to 5th, during the passage of high area number i, were, generally, the lowest observed in February since the establishment of Signal Service stations; this was especially the case in the Ohio Valley, Tennessee, and in the Atlantic and Gulf States.

A decided excess over the average precipitation is shown in New England and the middle Atlantic states, while marked deficiencies occurred on the Pacific coast, in the Gulf States, and central valleys.

The excessive rains in southeastern New England from the 10th to 14th, during the prevalence of low area ii, may be considered one of the most important features of the month. These heavy rains resulted in freshets which caused the destruction of much property in Massachusetts, Rhode Island, and Connecticut.

An additional chart, number v, is issued with this REVIEW; it shows the oscillations of atmospheric pressure and temperature during the month, as charted from the tri-daily telegraphic observations, for the following stations: Eastport, Maine; New Orleans, Louisiana; Portland, Oregon; and Saint Paul, Minnesota.

In the preparation of this REVIEW the following data, received up to March 20, 1886, have been used, viz., the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and thirty-three Signal Service stations and twenty-one Canadian stations, as telegraphed to this office; one hundred and fifty-eight monthly journals and one hundred and sixty-five monthly means from the former, and twenty-one monthly means from the latter; three hundred and eleven monthly registers from voluntary observers; fifty-nine monthly registers from United States Army

post surgeons; marine records; international simultaneous observations; marine reports through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs, furnished by the publishers of "The New York Maritime Register;" monthly weather reports from the New England Meteorological Society, and from the local weather services of Alabama, Illinois, Indiana, Minnesota, Missouri, Nebraska, Ohio, and Tennessee, and of the Central Pacific Railway Company; trustworthy newspaper extracts, and special reports.

ATMOSPHERIC PRESSURE.

[Expressed in inches and hundredths.]

The mean atmospheric pressure for February, 1886, determined from the tri-daily telegraphic observations of the Signal Service, is shown by isobarometric lines on chart ii.

The mean pressure is greatest over the middle slope and middle plateau; it is least over the Canadian Maritime Provinces. The isobar for 30.25 incloses the area of barometric maxima, and that for 29.9 indicates the region of least pressure. The barometric means have generally exceeded 30.1 in all parts of the country, except over the northern districts eastward of the upper Mississippi valley, in southern Arizona, and along the Gulf and Pacific coasts. The highest and lowest barometric means, 30.27 and 29.89, are reported from Salt Lake City, Utah, and Sydney, Nova Scotia, respectively.

As compared with the mean pressure for the preceding month, a decrease is shown over the southern portions of Arizona and California; also in northern Texas, Indian Territory, Kansas, Nebraska, and over the northern districts from western Montana eastward to the New England coast. The decrease is most marked in the extreme northwest and Canadian Maritime Provinces, where it amounts to .15. To the southward of the Lake region and upper Mississippi valley, and over an area extending from the west Gulf states to the north Pacific coast, the barometric means are higher than for January, the increase being greatest on the north Pacific coast, where it ranges from .10 to .15.

The departures from the normal pressure at the various Signal Service stations are given in the tables of miscellaneous meteorological data, and on chart iv they are shown by lines connecting stations of equal departure. Along the Atlantic coast, and over the northern districts from the lower lake region westward to Washington Territory, the mean pressure is below the normal; it is also below the normal in the lower Missouri valley, California, and southern Oregon; the departures in the districts named are generally less than .05, except in New England where they range from .05 to .09. In the Ohio Valley, west Gulf states, Rio Grande Valley, north Pacific coast region, and in the northern and central Rocky Mountain districts, the mean pressure for February, 1886, is above the normal, the departures nowhere exceeding .06.

BAROMETRIC RANGES.

The following are some of the extreme monthly ranges:

Greatest.	Least.
Inches.	Inches.
Eastport, Maine.....	San Diego, California.....
Portland, Maine.....	Koy West, Florida.....
Mount Washington, New Hampshire.....	Los Angeles, California.....
Boston, Massachusetts.....	Fort Grant, Arizona.....
Mackinaw City, Michigan.....	San Louis Obispo, California.....
Escanaba, Michigan.....	Fort Thomas, Arizona.....
New London, Connecticut.....	Fort Apache, Arizona.....
Block Island, Rhode Island.....	San Francisco, California.....

The monthly barometric ranges at the various Signal Ser-